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Stories this week:

MN012501. Computer "Game" Keeps Pilots Out of Laser Fire
MN012502. San Diego Staff Keeps Personal Assistants in Their Pockets
MN012503. NNMC Uses New Cancer Detection Method
MN012504. Navy Doc Cares for Thai Children
MN012505. U.K. Medical Clinic Does Strategic Planning the Innovative Way
MN012506. Twentynine Palms Wins Golden Anchor Award
MN012507. Winston, Curtis Win Academic Research Competition
MN012508. Beddard Named Examiner for 2001 Baldrige Awards
MN012509. HealthWatch: Splish Splash Hygiene

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MN012501. Computer "Game" Keeps Pilots Out of Laser Fire
By Jan Davis & Doris Ryan, Bureau of Medicine and Surgery
San Antonio, TX - It looks like a sophisticated computer game, but LTAMPS is no toy. If you're a Navy or Marine Corps pilot, it might just save your vision, or even your life.

The Laser Threat Analysis and Mission Planning System, or LTAMPS, is a training and flight planning computer program that models encounters between a laser-armed marksman on the ground and an aircraft in flight. LTAMPS will help pilots determine the best routes and actions to take to avoid the laser fire that can cause eye damage or disabling flash blindness.

Researchers from Naval Health Research Center Detachment, Brooks Air Force Base San Antonio, TX, collaborating with the Naval Strike and Air Warfare Center (NSAWC) in Fallon, NV, analyzed more than 200 flight profiles from fighter aircraft and helicopters to determine pilot vulnerability to laser marksmen on the ground.

"We collected data on a number of flights, with a marksman using a hand-held laser tracking aircraft moving at 500 knots," said LCDR Sean Biggerstaff, MSC, who is the principle investigator on the project. "Then we evaluated at which points the marksman had a clear line of sight into the cockpit."

With this data in hand, and adding more information such as atmospheric conditions and aircraft configurations, the research team developed a program that shows a real landscape overlaid with a grid that changes colors as that pilot enters areas where there's a high chance of being hit by laser fire.

"LTAMPS can be used as a mission planning or training tool to provide the warfighter with a realistic assessment of the threat of a ground-based laser to an aircraft," said Biggerstaff. "This is aviation medicine at work."

The Air Force and National Air Intelligence Agency have already begun using LTAMPS, and other agencies are also interested.

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MN012502. San Diego Staff Keeps Personal Assistants in Their Pockets

By JO2 Terrina Reed, Naval Medical Center San Diego

San Diego - Naval Medical Center San Diego staff are turning in their ubiquitous little green notebooks for a more capable replacement - the Personal Digital Assistant, or PDA.

Not only will the handy device cut down on paperwork and make note taking easier and more legible, it also saves on the amount of time spent at a desktop computer. And there's also another bonus - less time on a big computer may mean up to a 20 percent reduction in energy use during peak hours.

PDAs have a multitude of uses. For example, some physicians on the center's staff now have the Physician's Desk Reference uploaded in their PDA, which means they can carry the reference in their pocket. The paper version of the reference weighs more than ten pounds and is four inches thick.

"Hand-helds (PDAs) are relatively new and the ways in which they can be used are largely unexplored," said LCDR Emory Fry, MC. "They are not going away, and we are investigating easy and efficient ways for people to use them."

Physicians aren't the only staff members using PDAs.

"I started using the PDA 18 months ago and I love it," said CDR Dave Girardin, CHC, one of the center's chaplains. "We used to have a checklist on a clipboard and we would go floor to floor with this list. Everyday we would have to make several copies for morning turnover. Now I do the checklist on my PDA and simply beam (e-mail) the information."

The Center's chaplains also find that they can carry several different books of faith in the palm of their hand, literally.

According to LCDR Mary LaCroix, MSC, director for informatics for NMC San Diego, the PDA is as safe a method for storing information as any computer. Passwords are needed to access information on it and each owner is responsible for their own PDA.

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MN012503. NNMCMC Uses New Cancer Detection Method

By JO2 Ellen Maurer, NNMCMC Bethesda

Bethesda, MD - "Liquid-based cytology is a new and sophisticated way to test for cancer! More effective than conventional smear methods!"

You may have seen it touted in magazines and newspapers, a new method of collecting and testing human cells that is proving to be more useful in diagnosing some cancers. According to recent studies, this testing may be up to 280 percent more effective in detecting pre-malignant cells than the conventional smear methods.

It may be praised as "new" and "cutting edge", but NNMCMC Bethesda and some other Navy medical facilities have been using the method since 1999. It's a useful test in both women's and men's healthcare.

"While it is true that liquid-based cytology is used mostly for women's Pap tests, it is also used to find anal cancer in men," said CDR Robert Heaton, MC, the center's lab service line team leader. "What's more, the test can be used to check both sexes for the human papilloma virus, which is widely accepted as being an indicator for a predisposition to developing cancer."

Key to the new test is that it lessens the possibility of human error. During a conventional test, doctors use a swab to gather cells. Then, the swab is immediately smeared onto a glass slide and spray-sealed with a fixative solution. If the cells are smeared too thick or the spray applied too late, the cells may look abnormal to a lab tech when they're not.

With liquid-based cytology, machines make the slides. After cells are swabbed from patients, instead of smearing them onto a slide, they are immediately placed into a vial of special liquid. The vial is put into a special machine that separates the fluid out and fixes a very thin layer of the cells onto a glass slide so technicians can clearly see each individual cell.

According to Heaton, the newer process means more accurate results. Since the change to liquid-based cytology, NNMC has seen a drop in atypical reports. While liquid-based testing is more costly than the conventional method, in the long run, it could save money by cutting down on unnecessary re-testing.

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MN012504. Navy Doc Cares for Thai Children

By ENS Christina Skacan, Exercise CARAT

Makamku District, Thailand - Navy doctor LT Amy Rindfleisch, MC, loves children, so it's no wonder she loved this job. Single-handedly, she's treated nearly a hundred of them in just a couple of days in tropical Thailand, without X-ray machines, assistants or labs.

Rindfleisch was able to see her small Thai patients through a medical and dental civic action project that's taking place during the Navy bilateral annual exercise Cooperation Afloat Readiness and Training, or CARAT.

"We saw whoever showed up, villagers young and old," said Rindfleisch. "In the (Navy) clinic we'd do cultures, lab work, things we have to wait for. It's different out here. We just read the symptoms."

Rindfleisch diagnosed and treated ailments ranging from flu, pneumonia, asthma, rashes, scabies, and boils. One teen, Wilai, 15, heard about the clinic the Navy doctors set up from monks at the local Buddhist temple. She carried her sister, Kanongwan, 1, to the elementary school that was serving as the treatment facility. With help from a Thai Royal Navy medical professional who acted as a translator, the shy teen listed her sister's symptoms - runny nose, cough, fever, sore throat, and diarrhea.

"It's challenging to see the interaction from the child's point of view - a lot of things they perceive as scary," said Rindfleisch. "Many of the children had never before seen an American, let alone an American doctor."

Rindfleisch was one of three Navy doctors and a dentist who treated more than 400 medical patients and almost 100 dental patients. The dentist alone extracted 120 teeth in eight hours.

In addition to medical care, patients received non-prescription medications such as Tylenol, Robitussin, and multi-vitamins.

The Navy carried out a variety of civic projects in Southeast Asia during the exercise.

Rindfleisch' permanent assignment is U.S. Naval Hospital Okinawa, JA.

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MN012505. U.K. Medical Clinic Does Strategic Planning the

Innovative Way

By LT Rod Salvador, U.S. Naval Medical Clinic U.K.

London, UK - The Executive Steering Committee of U.S. Naval Medical Clinic U.K. met recently to reassess and update its strategic and annual plans, but what made this unique was that current and prospective commanding officers, executive officers and command master chiefs were all involved. This may be the first time in Navy medicine that both incoming and outgoing leadership were able to share their perspectives together.

"I found the opportunity to move the mission and vision forward during leadership transition to be more than valuable, but critical to maintaining the command on a smooth course ahead," said CAPT Richard Gilbert, MC, the incoming commanding officer. "I strongly recommend this become routine with Navy Medicine."

The ESC shared the new plan with the entire staff, seeking feedback. This innovative approach is expected to make the transition to new command leadership seamless.

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MN012506. Twentynine Palms Wins Golden Anchor Award

By Dan Barber, Robert E. Bush Naval Hospital

Twentynine Palms, CA - The Robert E. Bush Naval Hospital in Twentynine Palms was recently awarded the Commander in Chief, U.S. Pacific Fleet's Gold Anchor for retention excellence.

The hospital far exceeded the goals set by the Pacific Fleet in all categories.

ADM Thomas B. Fargo, Commander in Chief, Pacific Fleet praised the hospital's staff for their dedication and commitment to career motivation and excellence.

"(This) attest(s) to your concern for the personal and professional needs of your command to ensure that the essential information required to make informed career decisions is delivered to our Sailors," said Fargo.

The hospital is a repeat winner. It also received the Golden Anchor for retention in 1996.

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MN012507. Winston, Curtis Win Academic Research Competition

By Susana Hazelden, NMC San Diego

San Diego - LT Anthony Winston, MC, Naval Medical Center Portsmouth, VA, and CDR Jerri Curtis, MC, National Naval Medical Center Bethesda, MD, won this year's Navy-wide medical Academic Research Competition.

Naval Medical Center San Diego hosted the annual competition, which is designed to stimulate interest in research supporting the Graduate Medical Education Program, highlight the Clinical Investigation Program and promote Navy research to the military and civilian communities.

There are two levels of awards. Winston's research, "Comparison of Inhaled Isopropyl Alcohol and Ondansetron for Treatment of Postoperative Nausea and Vomiting," won at the resident level. Curtis's research, "Purification and Characterization of a Pulmonary Hypertensive Agent from Group B Streptococcus," won at the staff level.

The competition, held annually, was established in 1986. All residents and staff or fellows in good standing from the three major naval teaching medical centers, San Diego, Portsmouth and Bethesda, are eligible to participate.

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MN012508. Beddard Named Examiner for 2001 Baldrige Awards

Norfolk, VA - CAPT James R. Beddard Jr., MSC, of the Navy

Environment Health Center in Norfolk, VA, has been appointed by the director of the National Institute of Standards and Technology (NIST) to the 2001 Board of Examiners for the Malcolm Baldrige National Quality Award.

The award, created by public law in 1987, is the highest level of national recognition of performance excellence that any U.S. organization can receive.

As an examiner, Beddard is responsible for reviewing and evaluating applications submitted for the award. The board is made up of leading experts selected from industry, professional and trade organizations, education and healthcare organizations, and government.

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MN012509. HealthWatch: Splish Splash Hygiene

By Nicole Deaner, Bureau of Medicine and Surgery

It's 98 degrees outside and the only thing on your mind is to rush home, grab the kids, and hit the pool. There's nothing more refreshing than a dip in the pool to cool down your body and your mood.

One of the rites of the beginning of summer is reminding children about safe swimming and diving practices, but all too often another pool safety lesson is completely forgotten - the importance of good hygiene practices to prevent the spread of disease-causing germs.

When you use a public swimming facility, you are bathing with a myriad of strangers. The unfortunate fact is that many people do not practice good public hygiene and may spread disease in public facilities.

Harmful viruses or bacteria - what healthcare professionals call pathogens - can survive in fresh or salt water in pools, water parks, hot tubs, and spas. These pathogens can result in a range of illnesses including stomachaches, diarrhea, skin rashes and respiratory illnesses. These illnesses can be a significant threat to children, pregnant women, and people with weakened immune systems.

According to LT Rohini Suraj, MSC, head of the environmental health department at the Navy Environmental Health Center in Norfolk, VA, chlorine is an effective germ killing disinfectant. However, if not properly used, it is possible for pathogens to still be active in the water. Chlorine is unstable and must be constantly renewed to stay at an effective level. With warm water and crowded pools, pool managers must be vigilant to keep chlorine levels at optimum levels.

"Chlorine easily dissipates under a number of conditions such as high temperature, direct sunlight, high levels of organic matter, and lots of bathers present in the water," said Suraj.

What can happen is vividly illustrated by an outbreak at an Atlanta public swimming pool in 1998. E. coli, a virulent bacteria, found its way into the water. One child died and 25 people were sickened.

A popular new alternative in public pools and parks are recreational water fountains that spout up from the ground. Who can resist the temptation of running through a sprinkler in the sweltering heat? But just like public pools, these fountains can become contaminated with bacteria from a single infected individual, spreading germs to unsuspecting splashers.

But the dangers of poor pool hygiene doesn't mean you have to have a dry summer. Practice good hygiene and encourage others to do so as well, and you can lessen the chances of contracting and spreading contaminants in public swimming areas. Here are some hygiene hints:

- Don't swim if you have diarrhea. Germs in the pool water can spread even without having an "accident".

- Bathe before entering the pool to reduce risk of contamination.

- Don't drink pool water. Teach children to swim with their mouths closed.
- Wash your hands thoroughly with soap and water after using the bathroom.
- Take your child on frequent bathroom breaks.
- Don't change diapers poolside. Use the bathroom and thoroughly wash your child and yourself before returning to the pool.
- Notify a lifeguard if you see feces in the pool or if you see someone practicing improper poolside behavior, such as diaper changing.
- Don't rely on swim diapers or pants to stop accidents from leaking into the pool - they are not leakproof.

"Generally, swimming pools and other public bathing facilities can be safe against pathogens if the chlorine level is maintained," said Suraj. "It's only when chlorine levels slip that the risk of disease is increased."

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